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a source electrode connected to the source diffusion region;

a drain diffusion region of the second conductivity type disposed within the first region;

a drain electrode connected to the drain diffusion region;

a buried region of the first conductivity type disposed within the first region, a first conduction channel being formed above the buried region and a second conduction channel being formed below the buried region, the buried region being spaced-apart from the drain diffusion region; and

an insulated gate formed over the channel region.

wherein a doped impurity concentration in the 1st region above the buried region being about $1 \times 10^{12}/cm^2$ or greater.

Claim 12 should be replaced with:

12. (Amended) A high voltage field-effect transistor (HVFET) comprising:

a substrate of a first conductivity type;

a first region of a second conductivity type disposed within the substrate;

a source diffusion region disposed in the substrate spaced-apart from the first region, an IGFET channel region being formed between the source diffusion region and the first region;

a drain diffusion region disposed in the first region;

a buried region of said first conductivity type disposed within the first region of said substrate, the buried region forming JFET channels within the first region, one JFET channel being formed above the buried region with a doped impurity concentration of approximately 1 X $10^{12}/cm^2$ or greater and another JFET channel below the buried region, the buried region being spaced-apart from the drain diffusion region;

an insulated gate formed above the IGFET channel region.

Claim 68 should be replaced with:

68. (Amended) A high voltage field-effect transistor (HVFET) comprising:

a substrate of a first conductivity type;

a first region of a second conductivity type disposed in the substrate, the first region having a laterally extended portion that forms a lateral boundary with the substrate;

a drain diffusion region of the second conductivity type disposed in the first region and separated from the lateral boundary by the laterally extended portion;

a second region of the first conductivity type disposed in the substrate;

a source diffusion region of the second conductivity type disposed in the second region, a channel region being formed between the source diffusion region and the lateral boundary;

an insulated gate disposed above the channel region;

a buried region of the first conductivity type sandwiched within the laterally extended portion of the first region to form a junction field-effect device in which current flows in the first region both above and below the buried region, a doped impurity concentration in the first region above the buried region being about 1 X $10^{12}/cm^2$ ~~or greater.~~

Claim 77 should be replaced with:

77. (Amended) A high voltage field-effect transistor (HVFET) comprising:

a substrate of a first conductivity type;

a first region of a second conductivity type disposed in the substrate, the first region having a laterally extended portion that forms a lateral boundary with the substrate;

a drain diffusion region of the second conductivity type disposed in the first region and separated from the lateral boundary by the laterally extended portion;

a source diffusion region of the second conductivity type disposed in the substrate and spaced-apart from the lateral boundary of the first region, a channel region being formed between the source diffusion region and the lateral boundary;

an insulated gate disposed above the channel region;

a first buried layer of the first conductivity type disposed in the substrate beneath the source diffusion region;

a second buried layer of the first conductivity type sandwiched within the laterally extended portion of the first region and spaced-apart from the lateral boundary so as to act as an effective gate controlling dual current channels in the first region both above and below the second buried layer, a doped impurity concentration in the first region above the second buried region being about 1 X $10^{12}/cm^2$ ~~or greater.~~

Claim 104 should be replaced with:

104. (Amended) The HVFET according to claim 1 wherein the buried region has a doped impurity concentration approximately twice that of the first conduction channel.

Claim 105 should be replaced with:

105. (Amended) The HVFET according to claim 1 wherein the buried region has a doped impurity concentration of approximately 2 X $10^{12}/cm^2$.

Claim 106 should be replaced with:

106. (Amended) The HVFET according to claim 1 wherein the second conduction channel has a doped impurity concentration of approximately 2 X $10^{12}/cm^2$.

Claim 110 should be replaced with:

110. (Amended) The HVFET according to claim 12 wherein the buried region has a doped impurity concentration approximately twice that of ~~the one~~ said one of said JFET channels above the buried region.

Claim 111 should be replaced with:

111. (Amended) The HVFET according to claim ~~12~~ 110 wherein the buried region has a doped impurity concentration of approximately 2 X $10^{12}/cm^2$.

Claim 112 should be replaced with:

112. (Amended) The HVFET according to claim ~~12~~ 111 wherein the another JFET channel ~~has a~~ of said JFET channels doped impurity concentration of approximately 2 X $10^{12}/cm^2$.

Claim 116 should be replaced with:

116. (Amended) The HVFET according to claim 68 wherein the buried region has a doped impurity concentration approximately twice that of the first region above the buried layer.

Claim 117 should be replaced with:

117. (Amended) The HVFET according to claim ~~68~~ 116 wherein the buried region has a doped impurity concentration of approximately 2 X $10^{12}/cm^2$.

Claim 118 should be replaced with:

118. (Amended) The HVFET according to claim ~~68~~ 117 wherein the first region below the buried layer has a doped impurity concentration of approximately 2 X $10^{12}/cm^2$.

Claim 122 should be replaced with:

122. (Amended) The HVFET according to claim 77 wherein the second buried region has a doped impurity concentration approximately twice that of the first region above the second buried layer.

Claim 123 should be replaced with:

123. (Amended) The HVFET according to claim ~~77~~ 122 wherein the second buried region has a doped impurity concentration of approximately 2 X $10^{12}/cm^2$.

Claim 124 should be replaced with:

124. (Amended) The HVFET according to claim ~~77~~ 123 wherein the first region below the second buried layer has a doped impurity concentration of approximately 2 X $10^{12}/cm^2$.

Please add the following new claims to the application. 127-128

129

~~127.~~ (New) A high voltage field-effect transistor (HVFET) comprising:

a substrate of a first conductivity type;

a first region of a second conductivity type disposed within the substrate;

a source diffusion region of the second conductivity type disposed in the substrate spaced-apart from the first region, a channel region being formed in the substrate between the source diffusion region and the first region;

a source electrode connected to the source diffusion region;

a drain diffusion region of the second conductivity type disposed within the first region;

a drain electrode connected to the drain diffusion region;

a buried region of the first conductivity type disposed within the first region, a first conduction channel being formed above the buried region and a second conduction channel being formed below the buried region, the first conduction channel having a doped impurity concentration of 1 X $10^{12}/cm^2$ or greater, the buried region being spaced-apart from the drain diffusion region; and

an insulated gate formed over the channel region.

130 ~~128.~~ (New) The HVFET according to claim 129 ~~127~~ further comprising:

a second region of the first conductivity type disposed within the substrate, the source diffusion region being disposed within the second region.

131 ~~129.~~ (New) The HVFET according to claim 130 ~~128~~ further comprising

a third region of the first conductivity type disposed in the second region adjacent to the source diffusion region.

132 ~~129.~~ The HVFET according to claim 129 ~~127~~ wherein the buried region is connected to the substrate.

133 ~~130.~~ (New) The HVFET of claim 129 ~~127~~ further comprising:

a tap diffusion region of the second conductivity type disposed in the first region near a perimeter boundary of the first region.

134 ~~131.~~ (New) The HVFET according to claim 129 ~~127~~ further comprising:

a second buried region of the first conductivity type disposed within the substrate beneath the source diffusion region.

135 ~~132.~~ (New) The HVFET according to claim 134 ~~131~~ wherein the second buried region extends laterally ~~from the source diffusion region~~ to a region under the channel region.

136 ~~133.~~ (New) The HVFET according to claim 129 ~~127~~ wherein the first and second conductivity types are p-type and n-type, respectively.

137 129
~~134~~. (New) The HVFET according to claim ~~127~~ wherein the buried region includes one or more openings that connect the first and second conduction channels.

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138 129
~~135~~. (New) The HVFET according to claim ~~127~~ wherein the source and drain electrodes include field plate members.

139 129
~~136~~. (New) The HVFET according to claim ~~127~~ wherein the buried region comprises a plurality of buried layers that form a corresponding plurality of conduction channels.

N. R.